Application No.: 10/714,148

REMARKS/ARGUMENTS

The present application contains claims 14-21 and 35-37. Claims 14-19 and

35-37 have been allowed.

It is noted that the present action is a Final action.

The Applicants note the Patent Office acknowledgment of Applicant' claim for

foreign priority and further that all certified copies of the priority documents have

been received by the Patent Office.

Claim 20 has been amended to conform the claim with the teachings of the

See the entire paragraph starting at line 1 on page 67 of the

application and specifically lines 10-17 of page 67, which refers to "kinetic energy".

Claims 20 and 21 have been rejected under 35 U.S.C. §102(e) as anticipated

by Naganuma (patent '502). This rejection is respectfully traversed.

The Examiner states that Naganuma teaches a shutter device comprising a

shutter blade 3b, a guide unit (sloping surface) 12S for guiding a portion of the

shutter blade (3a) in the direction transverse to a path of movement of said blade

(3a) at a location where the shutter blade is temporarily stopped or finishes the

movement of the shutter blade (the Examiner making reference to line 30, column 9

of patent '502; and an absorbing member "3d" positioned to abut the shutter blade

portion when the shutter blade is guided by said guide unit. The Examiner further

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directs Applicants to review Figure 1 as well as column 9, lines 22-33 and further

notes that Figure 8 of patent '502 depicts that the shutter device is a lens shutter

device.

Applicants have carefully reviewed the '502 patent and most respectfully

disagree with the Examiner's interpretation of the teachings of the '502 patent.

Firstly, there is no absorbing member 3d nor is there any designating

number (3d) anywhere in the drawings or specification of patent '502.

Making reference to Figure 1 and to the specification at column 3, lines 33-

45, the shutter blades are identified as bottom shutter blade 3a and top blade 3b.

Applicants submit that the Examiner's reference to a number "3b" may have

resulted from the manner in which the designating numerals are indicated in

Figure 1. Making reference to the right-hand view of the shutter blades in Figure 1,

which shows the shutter blades as being open, the right-hand shutter blade is

shutter blade 3a, however, the manner in which the alphabetic letter was formed in

Figure 1 gives the impression that designating numeral is "3d". However, upon

reading the specification, it is clear that what might appear to be "3d" in both the

left-hand (closed blade) and right-hand (open-blade) views of Figure 1 is actually the

designating numeral 3a.

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Shutter blades 3a and 3b each have an elongated slot 34a, 34b through which

a transmission member 69 extends. Transmission member 69 is shown in Figure 2

and described at column 9, line 28, for example. Transmission member 69 is

mounted along the bottom side of base member 1, the bottom view of base member 1

being shown in Figure 2 while the top view of base member 1 is shown in Figure 1.

The transmission member 69 extends through an elongated, rectangular-shaped slit

75. The rebounding of the blades 3a, 3b upon closing, is described at column 9, lines

16-42. The rebounding is described as occurring "because the transmission

member 69 on the drive unit 6 strikes the edge of the rectangular-shaped slit 75 and

returns to the opposite direction". In patent '502 there is no rebounding of the

shutter blades due to the striking of the blades against a stationary member.

Rebounding movement of transmission member 69 is imparted to shutter blades 3a,

3b.

Although the present invention admittedly employs guides 211n, 214n shown

in Figures 25 and 26, these guides deflect the end portions of the blades 213 and

212 toward respective absorbing members 211k and 214k which absorb the kinetic

energy of the blades.

In contrast, patent '502 teaches a design which is intended to consume

kinetic energy by friction between the top blade 3b and the bottom blade 3a which

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come together due to the sloping portion 12S of guide 12 which causes bottom blade

3a to move upwardly toward top blade 3b. The technique employed in the '502

patent requires a predetermined time upon ending of the shutter running (i.e., a

predetermined running distance of the shutter blade is required in order to prevent

rebounding). Hence, adequate space must be provided within the shutter device

taught by patent '502.

The present invention employs an absorbing member which performs a

function of absorbing kinetic energy of the blade, the strain energy caused as a

result of the blade being deformed almost at the end of the running of the shutter

blade. In accordance with the technique of the present invention, as set forth in

claims 20 and 21, since the kinetic energy is absorbed during a relatively short

period of time, the running distance for preventing rebounding is reduced, as

compared with the teachings of patent '502, thereby reducing the overall space

taken by the shutter device and providing a smaller, more compact camera.

However, it may be possible that the shock absorbing material of the present

invention interferes with the strained shutter blade and some of the kinetic energy

of the shutter blade is thus consumed by friction at that time. Nevertheless, there

is no teaching or even the suggestion in Patent '502 of an absorbing member for

absorbing kinetic energy of the shutter blade.

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independent of the guide unit. The '502 patent is limited to teaching that friction

Note that the absorbing member set forth in claim 20 is separate and

between two (2) blades slows the movement of the blades due to the guide slope 125

which, urges the blades to make contact with one another. This causes friction

which slows down the moving blades. The "second" blade of patent '502 is not an

absorbing member.

In view of the foregoing, it is submitted that claim 20 patentably

distinguishes over patent '502.

Claim 21 depends from Claim 20 and carries all of its limitations and hence

is deemed to patentably distinguish over patent '502 for the same reasons set forth

hereinabove with regard to Claim 20.

In view of the foregoing, it is submitted that Claim 20 and 21 are allowable

and reconsideration and allowance of these claims together with allowed claims 14-

19 and 35-37, are earnestly solicited.

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Applicant: Shiratori et al. **Application No.:** 10/714,148

Favorable action is awaited.

Respectfully submitted,

Shiratori et al.

Louis Weinstein

Registration No. 20,477

(215) 568-6400

Volpe and Koenig, P.C. United Plaza, Suite 1600 30 South 17th Street Philadelphia, PA 19103

LW/kml/tmf